



RIVAMED RO - S
- XL

RIVAMED

Save Water, Save Life



**Central Reverse
Osmosis**

RIVAMED RO is the optimum solution for most dialysis centers that ensures optimal permeate quality even when dealing with lower-grade feed water.

RIVAMED RO is engineered to meet various international standards and regulations for dialysis.

For the thermal disinfection of ring mains, media, supply systems, and dialysis machines, the RIVAMED RO effortlessly integrates with our Heat Disinfection and Ultrafiltration systems.

The user-friendly interface not only streamlines the configuration and monitoring of the RIVAMED RO but also facilitates straightforward connectivity and software updates.

Operating options using two ROs

- Serial
- Parallel

Compliance with ISO Standards

RIVAMED RO-S/XL dialysis water system simplifies adherence to ISO standards for dialysis water quality.

ISO 23500-1

Part 1: addresses guidance for the preparation and quality management of fluids for hemodialysis and related therapies

ISO 23500-2

Part 2: covers water treatment equipment for hemodialysis applications and related therapies

ISO 23500-3

Part 3: specifies minimum requirements for water for hemodialysis and related therapies

economical

protective

convenient

functional

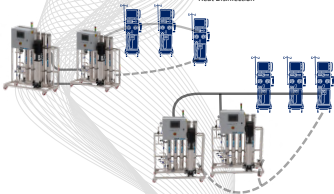
cost-effective



- Enhanced chemical and microbiological purity
- Implementation of Water & Electricity Saving Technology via permeate recirculation and controlling the pumps based on water need of dialysis machines
- Utilization of a multicolor touchscreen interface
- Streamlined design for space efficiency
- Semi-automated chemical disinfection and fully automatic heat disinfection programs
- Integration of high-rejection polyamide membranes
- Incorporation of a permeate pressure-sustaining valve for precise system pressure control
- Continuous monitoring of conductivity, pressure, temperature, permeate and concentrate flow
- Programmable multiple independent shut on/off functionality
- Settable interval flush timer programs
- Built-in self-test feature upon power-up
- Emergency mode activation in the event of electronic failures
- Supervision and control via PLC/microprocessor control panel
- Firmware upgrade capability for ongoing improvements
- Automatic system restart following a power interruption
- Implementation of security parameters including permeate overpressure, permeate conductivity, permeate overtemperature, dry run protection, pump protection, and operation history logging
- AISI 316 stainless steel buffer tank equipped with level switches for operational ease and pump protection
- AISI 316 Stainless steel tubing and frame
- Designed to be dead leg-free, ensuring maximum hygiene levels
- Password protected user levels
- Visual LED indicator with acoustical signal
- Brake adjusting wheel for ease of transportation
- Permeate tank control option
- Permeate and return sampling valves

Optional

- Leakage detector
- Ultrafiltration (Bacteria & Endotoxin filter)
- Remote Control
- Heat Disinfection










Technical Data 1/2

| PARAMETER | | RIVAMED RO-S | RIVAMED RO-XL |
|--------------------|---|--|---------------------------------------|
| Performance | Dimensions (L x W x H) (max.) | 143 x 55 x 135 cm | 220 x 70 x 140 cm |
| Data | Weight | Max. 300 kg | Max. 600 kg |
| | Dialysis water production capacity | 350-1,750 lt/h | 1,000-5,000 lt/h |
| | Point of use (dialysis machines) | 36 pcs | 104 pcs |
| | Dialysis water pressure | 2-6 bar | |
| | Concentrate pressure | < 20 bar | |
| | Retention rate (dissolved salts) | > 99% NaCl (+0.6% avg.) | |
| | Bacteria (CFU) and endotoxins (EU) | > 99% | |
| | System recovery yield | Up to 85% water conversion factor | |
| | Noise level | < 70 dB (A) (from 3 meters distance) | |
| | Water | Soft water feed (1.4404) | Hose nipple DN 25 |
| Connections | Dialysis water feed and return (can feed up to three different bops) (1.4404) | Direct PE-Xa connector 20 x 2.3 mm | Direct PE-Xa connector 25 x 2.3 mm |
| | Drain water (1.4404) | Hose nipple DN 15 | Hose nipple DN 25 |
| | Electrical | Mains plug | CEE 32 A |
| Safety | Supply voltage | 380-400 V AC 50/60 Hz 220-230 V AC 50/60 Hz | 380-400 V AC 50/60 Hz |
| | Energy consumption | Max. 3 kW | Max. 5.5 kW |
| | Degree of water protection | Splash-proof (IPX4) | |
| | Applied parts classification | Type B | |
| | Type of protection against electric shock | Protection class 1 | |
| | Leakage currents | According to ANSI/AAMI IEC 60601-1 | |
| | Operation mode | Continuous operation | |

Technical Data 2/2

| | PARAMETER | RIVAMED RO-S | RIVAMED RO-XL |
|----------------------|---------------------------------|--|---------------|
| Feed Water | Quality | Softened mains water / **Bore-well water | |
| | Hardness | < 1.78 ppm CaCO ₃ (0.038 mmol/l) | |
| | SDI | < 3 | |
| | Conductivity | < 2,500 µS/cm / *5,000 µS/cm | |
| | Total Dissolved Solids (TDS) | < 1,500 mg/l / *3,000 mg/l | |
| | Iron | < 0.1 mg/l | |
| | Manganese | < 0.05 mg/l | |
| | Silicate | < 25 mg/l | |
| | Free Chlorine | < 0.1 mg/l | |
| | Temperature range | 5 - 35 °C | |
| | pH value | 6.0 - 8.5 | |
| Ambient Conditions | Shipping/storage | +1 to +45 °C | |
| | Operation | +1 to +35 °C | |
| | Air humidity | max. 90% relative humidity, non-condensing | |
| | Installation altitude | < 2,000 m above sea level | |
| On-Site Requirements | Water supply | 1.5-6 bars dynamic pressure, pressure reducing valve or pressure booster pump may be required | |
| | Drain < 50 cm above floor level | DN 50 pipe, for 3 m ³ /h by gravity | |
| | Recommended pre-treatment units | 90 micr washable filter, multimedia sand filter, duplex water softener, activated carbon filter, microfiltration | |

*when two ROs are used in serial mode

| TFS-S/ML | RO-S/ML | Basic-S/ML | MM 100/0/200 0 | MM 100 | MO Mem1 (pH) | HSS |
|--|---|---|--|--|--|--|
| <p>State of the art technology per 8 m³ per day with 100% recovery and additional saving in the cost of construction.</p> <p>130-5, 020/1h</p> <p>Suitable for medium and large scale water treatment.</p> <p>Remote control</p> <p>Highly applicable</p> <p>AS2 316 stainless steel piping and steel</p> <p>Self-primed for remote</p> | <p>State of the art technology per 8 m³ per day with 100% recovery and additional saving in the cost of construction.</p> <p>110-5, 020/1h</p> <p>Suitable for medium and large water treatment.</p> <p>Remote control</p> <p>AS2 316 stainless steel piping and steel</p> <p>Self-primed for remote</p> | <p>Highly applicable technology for medium and large scale water treatment.</p> <p>130-5, 020/1h</p> <p>Suitable for medium and large water treatment.</p> <p>Optional remote control</p> <p>AS2 316 stainless steel piping and steel</p> <p>Self-primed for remote</p> | <p>First performance water treatment system with optional 100% recovery and 130-5, 020/1h</p> <p>Suitable for medium and large water treatment.</p> <p>PVC-U and AS 316 stainless steel piping and steel</p> <p>Self-primed for remote</p> | <p>State of the art technology per 8 m³ per day with 100% recovery and additional saving in the cost of construction.</p> <p>130-5, 020/1h</p> <p>Suitable for medium and large water treatment.</p> <p>PVC-U and AS 316 stainless steel piping and steel</p> <p>Self-primed for remote</p> | <p>State of the art technology per 8 m³ per day with 100% recovery and additional saving in the cost of construction.</p> <p>130-5, 020/1h</p> <p>Suitable for medium and large water treatment.</p> <p>PVC-U and AS 316 stainless steel piping and steel</p> <p>Self-primed for remote</p> | <p>State of the art technology per 8 m³ per day with 100% recovery and additional saving in the cost of construction.</p> <p>130-5, 020/1h</p> <p>Suitable for medium and large water treatment.</p> <p>PVC-U and AS 316 stainless steel piping and steel</p> <p>Self-primed for remote</p> |
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Remarks

Save Water Save Life



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